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| NEWS | 4 | FEB 28 | PATDPAFULL - New display fields provide for legal status data from INPADOC |
| NEWS | 5 | FEB 28 | BABS - Current-awareness alerts (SDIs) available |
| NEWS | 6 | FEB 28 | MEDLINE/LMEDLINE reloaded |
| NEWS | 7 | MAR 02 | GBFULL: New full-text patent database on STN |
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| NEWS | 11 | MAR 22 | Original IDE display format returns to REGISTRY/ZREGISTRY |
| NEWS | 12 | MAR 22 | PATDPASPC - New patent database available |
| NEWS | 13 | MAR 22 | REGISTRY/ZREGISTRY enhanced with experimental property tags |
| NEWS | 14 | APR 04 | EPFULL enhanced with additional patent information and new fields |
| NEWS | 15 | APR 04 | EMBASE - Database reloaded and enhanced |
| NEWS | 16 | APR 18 | New CAS Information Use Policies available online |
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| NEWS | 18 | APR 28 | Improved searching of U.S. Patent Classifications for U.S. patent records in CA/CAplus |

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| NEWS EXPRESS | JANUARY 10 CURRENT WINDOWS VERSION IS V7.01a, CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP), AND CURRENT DISCOVER FILE IS DATED 10 JANUARY 2005 |
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=> FIL STNGUIDE
COST IN U.S. DOLLARS SINCE FILE ENTRY TOTAL SESSION

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FULL ESTIMATED COST                                    0.21       0.21

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=> file caplus agricola medline
COST IN U.S. DOLLARS                              SINCE FILE      TOTAL
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FULL ESTIMATED COST                                   0.06       0.27

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FILE 'AGRICOLA' ENTERED AT 16:26:07 ON 15 MAY 2005

FILE 'MEDLINE' ENTERED AT 16:26:07 ON 15 MAY 2005

=> s selenium (3a) (uptake or accumulat?)
L1         1196 SELENIUM (3A) (UPTAKE OR ACCUMULAT?)

=> s l1 and (Brassica or brassicaceae or indian or mustard)
L2           96 L1 AND (BRASSICA OR BRASSICACEAE OR INDIAN OR MUSTARD)

=> s l2 and (increase? or elevate? or high) (3a) (level or concentrat?)
L3           26 L2 AND (INCREASE? OR ELEVATE? OR HIGH) (3A) (LEVEL OR CONCENTRAT
                ?)

=> s l3 not PY>1998
L4           15 L3 NOT PY>1998

=> dup remov l4
PROCESSING COMPLETED FOR L4
L5           14 DUP REMOV L4 (1 DUPLICATE REMOVED)

=> d his ab
'AB' IS NOT VALID HERE
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=> d his

     (FILE 'HOME' ENTERED AT 16:25:39 ON 15 MAY 2005)

     FILE 'STNGUIDE' ENTERED AT 16:25:45 ON 15 MAY 2005

     FILE 'CAPLUS, AGRICOLA, MEDLINE' ENTERED AT 16:26:07 ON 15 MAY 2005
L1         1196 S SELENIUM (3A) (UPTAKE OR ACCUMULAT?)
L2           96 S L1 AND (BRASSICA OR BRASSICACEAE OR INDIAN OR MUSTARD)
L3           26 S L2 AND (INCREASE? OR ELEVATE? OR HIGH) (3A) (LEVEL OR CONCENT
L4           15 S L3 NOT PY>1998
L5           14 DUP REMOV L4 (1 DUPLICATE REMOVED)

=> d l5 1-14 ab

L5   ANSWER 1 OF 14  CAPLUS  COPYRIGHT 2005 ACS on STN
AB   Selenium (Se) may be present in soils and sediments in high
     concns. and yet not be mobile or available for plant uptake.
     Phytoremediation of Se by canola (Brassica napus) was evaluated
     in sediment from Kesterson Reservoir at three different depths (0 to 30,
     30 to 60, 60 to 90 cm) under greenhouse and field conditions.  In the
     greenhouse study, total soil Se concns. at preplant ranged from 10 to 112
     mg kg-1.  Shoot Se concns. of canola were 182, 53, and 19 mg kg-1 DM in
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the 0 to 30, 30 to 60, and 60 to 90 cm depths, resp. Percentages of Se accumulated by canola relative to total Se loss in the soil at postharvest were as high as 24%. In the field study, total soil Se **concns**. were as **high** as 26 mg kg-1 soil. Field-grown canola accumulated approx. 50 mg kg-1 DM, which accounted for less than 10% of total Se lost in the soil at postharvest. Phytoremediation of Se-laden soils under field conditions was about 50% of that observed under controlled greenhouse conditions. This relationship may be useful for prediction of field remediation operation using greenhouse generated data.

L5 ANSWER 2 OF 14 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 1
AB Greenhouse and field expts. were conducted to study B and Se uptake in the following plant species used for bioremediation: Astragalus incanus, creeping saltbush (Atriplex semibaccata), old man saltbush (A. nummularia), **Indian mustard** (**Brassica** juncea), tall fescue (Festuca arundinacea), canola (**Brassica** napus), birdsfood trefoil (Lotus corniculatus), and kernaf (Hibiscus cannabinus). All 5 plant species, especially **Indian mustard** , accumulated and lowered soil Se concns. more effectively when grown in selenate-treated soil than selenite-treated soil. Plant tissue concns. of Se and B in **Indian mustard increase** proportionally to **concns**. of Se and B in water culture. **Indian mustard**, canola, and tall fescue accumulated and lowered native soil Se and B concns. when grown under greenhouse conditions. **Indian mustard** accumulated the highest concentration of native soil Se and kenaf accumulated the highest concentration of native soil B under field conditions. Vegetation management with any of the above plant species should be considered as a bioremediation tool for removing boron or selenium from contaminated soils.

L5 ANSWER 3 OF 14 CAPLUS COPYRIGHT 2005 ACS on STN
AB **High levels** of naturally occurring selenium (Se) are often found in conjunction with different forms of salinity in central California. Plants considered for use in phytoremediation **high** Se **levels** must therefore be salt tolerant. **Selenium accumulation** was evaluated for the following species under increasing salt (NaCl and CaCl2) conditions: **Brassica** napus L. (canola), Hibiscus cannibinus L. (kenaf), Festuca arundinacea L. (tall fescue), and Lotus tenuis L. (birdsfoot trefoil). The exptl. design was a complete randomized block with four salt treatments of <1, 5, 10, and 20 dS m-1, four plant species, three blocks, and six replicates per treatment. Ninety days after growing in the resp. salt treated soil with a Se concentration of 2 mg Se kg-1 soil, added as Na2SeO4, all plant species were completely harvested. Among the species tested, shoot and root dry matter yield of kenaf was most significantly ($p < 0.001$) affected by the highest salt treatment and tall fescue and canola were the least affected species. Generally there was a decrease in tissue accumulation of Se with increasing salt levels, except that low levels of salinity stimulated Se accumulation in canola. Canola leaf and root tissue accumulated the highest concns. of Se (315 and 80 mg Se kg-1 DM) and tall fescue the least (35 and 7 mg Se kg-1 DM). Total soil Se concns. at harvest were significantly ($p < 0.05$) lower for all species at all salt treatments. Removal of Se from soil was greatest by canola followed by birdsfoot trefoil, kenaf and tall fescue. Among the four species, canola was the best candidate for removing Se under the tested salinity conditions. Kenaf may be effective because of its large biomass production, while tall fescue and birdsfoot trefoil may be effective because they can be repeatedly clipped as perennial crops.

L5 ANSWER 4 OF 14 CAPLUS COPYRIGHT 2005 ACS on STN
AB Kesterson Reservoir and other impoundments in the San Joaquin Valley, California, have received large vols. of saline irrigation drainage water that is enriched with trace elements, including As, B, Mo, Se, U, and v. When these ponds are allowed to dry and revert to terrestrial ecosystems, careful soil water and vegetation management may be needed to prevent toxicol. hazards to wildlife and/or livestock. A 248-d column study was conducted in the greenhouse using a soil from Kesterson to assess the growth of salt- and B-tolerant genotypes, and to determine the uptake of As, B,

Mo, Se, U, and V by these genotypes. Elec. conductivity decreased with soil depth, from 14 to 5 dS m-1, with B, Mo, Se, and U concns. paralleling the soil salinity, whereas As and V were higher in the subsoil. Three grasses, alkali sacaton (Sporobolus airoides), tall wheatgrass (Elytrigia pontica), **Indian** ricegrass (Oryzopsis hymenoides), and two Se-accumulators, Astragalus bisulcalus and A. racemosus , were successfully established after a preplanting leaching treatment to reduce salts in the seed zone. Three cuttings of alkali sacaton and tall wheatgrass resulted in total shoot yields of 11.1 and 7.6 g per column, resp., but only 0.8 for a single cutting to the less salt- and B-tolerant **Indian** ricegrass. The slower-growing A. bisulcatus and A. racemosus yielded 3.8 and 4.4 g per column, resp. Shoot concns. of As, U, and V were low (<3 mg kg-1) in all genotypes, and do not seem to pose food-chain transfer hazards at this site. Molybdenum and Se shoot concns. of all genotypes exceeded the upper safe limits for consumption by ruminants, and shoot B **concns**. were also **high** (>60 mg kg-1). Despite **high** soil solution SO4 **concns**., both Astragalus species accumulated Se to **high concns**. in the shoots (ca. 650 mg kg-1), and shoot harvest removed the equivalent of 2 to 3.5 kg Se ha-1. Growth of these Se-accumulating species shows promise as a means of direct removal of Se from Se-contaminated sites and could become a component of effective remediation strategies.

L5 ANSWER 5 OF 14 CAPLUS COPYRIGHT 2005 ACS on STN

AB **High concns**. of boron (B) and selenium (Se) naturally found in the environment are detrimental to sustainable agriculture in the western USA. Greenhouse pot expts. were conducted to study B and Se uptake in three different plant species; **Brassica** juncea (wild brown **mustard**), Festuca arundinacea (tall fescue), and **Brassica** napus (canola) were grown in soil containing naturally occurring concns. of 3.00 mg extractable B kg-1 and 1.17 mg total Se kg-1 soil. During the growing season, four intermediate harvests were performed on wild **mustard** and tall fescue. Final harvest I consisted of harvesting wild **mustard**, canola, and clipping tall fescue. Final harvest II consisted of harvesting wild **mustard**, which had been planted in soil in which wild **mustard** was previously grown, and harvesting previously clipped tall fescue. The greatest total amount of above ground biomass and below surface biomass was produced by tall fescue. Plants were separated into shoots and roots, weighed, and plant tissues were analyzed for total B and Se. The highest concns. of tissue B were recovered in shoots of wild **mustard** and canola at final harvest I, while roots from tall fescue contained the highest concns. of B irresp. of the harvest. Tissue Se concns. were similar in all plant species. Soils were analyzed for residual B and Se. Extractable soil B concns. at harvest times were lowered no less than 32% and total Se no less than 24% for all three species. The planting of wild **mustard**, canola, or tall fescue can reduce water-extractable B and total Se in the soil.

L5 ANSWER 6 OF 14 CAPLUS COPYRIGHT 2005 ACS on STN

AB Plants grown on fly ash landfills can accumulate relatively **high concns**. of Se, although concns. can vary greatly among and within species. The accumulation of Se in forage and root crops grown on a fly ash landfill and nonlandfill sites and the relationship of soil Se to plant Se concns. were examined Because S can act as a competitive ion with Se in plant uptake of nutrients, gypsum (CaSO4.2H2O) was applied to soil on a fly ash landfill to determine whether Se was reduced in plants in its presence. Slightly more Se was accumulated in plants grown on the landfill than on the nonlandfill site. Total Se concentration in soil was poorly correlated with Se concentration in alfalfa plants grown on the landfill. In alfalfa, oats (Avena sativa), and rutabaga (**Brassica** napus ), application of gypsum at rates of 5.6-16.8 t ha-1 reduced the uptake of Se from that of plants grown without gypsum. Thus, gypsum amendment may be effective in decreasing the uptake of Se by plants growing on a fly ash landfill, but the response is quite variable, probably due to variability in concentration and availability of Se in the soil cap. The use of gypsum in limiting Se uptake by plants offers a possible management tool to control the cycling of Se through plants to other biota on fly ash landfills.

L5 ANSWER 7 OF 14 CAPLUS COPYRIGHT 2005 ACS on STN
AB A field study determined that phosphorus concns. influence the **accumulation** of **selenium** in the plant tissue of wild brown **mustard** (**Brassica** Juncea czern). The main treatment was a one-way H3PO4 application at five different concns. (less than 1, 10, 25, 50, and 100 mg P/L). A constant concentration of 5 mg Se/L was added as Na2SeO4 with each application. The H3PO4 and Se addns. were injected daily by a surface drip irrigation system. Plant dry weight yields did not vary significantly from one phosphorus treatment level to another, but plant tissue concentration of Se and P increased, soil Se decreased, and soil P **increased** as H3PO4 application **concns**. **increased**. Thus, adding phosphate to the soil in irrigation water contributed to Se-accumulation in **mustard** and led to lower levels in the soil.

L5 ANSWER 8 OF 14 CAPLUS COPYRIGHT 2005 ACS on STN
AB Greenhouse expts. were conducted to determine Se uptake by alfalfa (Medicago sativa) grown in soils amended with Se-laden **mustard** plant tissue. The exptl. design was a completely randomized block with treatments consisting of 5, 10, 20, and 40 g of added dried Se-containing **mustard** tissue to the soil, which resulted in soil Se concns. of 1.0, 1.6, 3.0, and 5.7 mg Se/kg, resp. Four clippings of alfalfa were made and the vegetative portions analyzed for dry weight and total Se. Plant dry weight yields and heights of plants were significantly reduced only at the highest Se treatment rate. Mean tissue Se **concns**. **increased** from 1.8 mg Se/kg DM at the 5 g treatment rate to 6.0 mg Se/kg DM at the 40 g treatment rate. Based on this study, alfalfa can accumulate Se during establishment year when Se-laden **mustard** plant tissue is added to the soil.

L5 ANSWER 9 OF 14 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2005) on STN
AB Greenhouse experiments were conducted to determine **selenium** (Se) **uptake** by alfalfa (Medicago sativa L.) grown in soils amended with Se-laden **mustard** plant tissue. The experimental design was a completely randomized block with treatments consisting of 5, 10, 20, and 40 g of added dried Se-containing **mustard** tissue to the soil, which resulted in soil Se concentrations of 1.0, 1.6, 3.0, and 5.7 mg Se/kg, respectively. Four clippings of alfalfa were made and the vegetative portions analyzed for dry weight and total Se. Plant dry weight yields and heights of plants were significantly reduced only at the highest Se treatment rate. Mean tissue Se **concentrations** **increased** from 1.8 mg Se/kg DM at the 5 g treatment rate to 6.0 mg Se/kg DM at the 40 g treatment rate. Based on this study, alfalfa can accumulate Se during establishment year when Se-laden **mustard** plant tissue is added to the soil.

L5 ANSWER 10 OF 14 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2005) on STN
AB **High concentrations** of Se found in the environment may be detrimental to sustainable agriculture in parts of the western USA. Greenhouse pot experiments were conducted to study Se concentrations in different plant species grown in soil with added Se. Astragalus incanus L. (no common name), creeping saltbush (Atriplex semibaccata R. Br. L.), Old Man saltbush (Atriplex nummularia Lindl L.), wild brown **mustard** (**Brassica** juncea Czern L.) and tall fescue grass (Festuca arundinacea Schreb L.) were grown in potting soil to which 3.5 mg Se6+ or Se4+ kg-1 was added either as Na2SeO4 or Na2SeO3, respectively. During the growing season, plants from both Se-treated soils were clipped either once, twice, or three times. After 50 to 55 d in Se-treated soil, plants were harvested, separated into shoots and roots, and analyzed for total tissue Se. Soils from each species were analyzed for total residual Se. Each species grown in Se6+-treated soils, accumulated significantly (P

less than 0.001) more Se than plants grown in Se4+-treated soil. For both Se6+ and Se4+ treatments, wild brown **mustard** and A. incanus had the highest and lowest tissue Se concentrations, respectively. Clipping of plants significantly (P less than 0.05) increased the accumulation of Se in the total harvested shoot tissue for wild brown **mustard** and slightly for the other species tested (except Old Man saltbush). Reduction in soil Se was observed for each species, with the greatest reduction occurring when plants of wild brown **mustard** were grown and clipped. Within any given treatment, wild brown **mustard** accumulated the highest concentrations of Se. In the remaining species, Se accumulated in the following order: Old Man saltbush greater than creeping saltbush greater than tall fescue greater than A. incanus. Selenium removal from soil by each species generally followed the same order as the accumulation of Se in the plant.

L5 ANSWER 11 OF 14 CAPLUS COPYRIGHT 2005 ACS on STN
AB Se, even when applied in the lower doses (0.2 ppm) was toxic to wheat (Triticum aestivum), **mustard** (**Brassica** juncea) and pea (Pisum sativum). With an **increase** in the **level** of Se, the Se content of the plants increased but plant height and dry matter decreased significantly. Application of 0.5 ppm of Se resulted in an increase in the Se content of plants above the level toxic to animals (>5 ppm). There was a linear relation between the dose of Se applied and the Se content of plants and a neg. correlation between the Se content of the plant and their dry-matter yields. The different plants absorbed only 1-12% of the added Se and the absorption quotient decreased with an **increase** in the **concn**. of the applied Se. The Se content of the plant and the absorption quotient varied with the plant species. The highest amount of Se was in Cruciferae and the least in Gramineae, with Leguminosae coming in between.

L5 ANSWER 12 OF 14 CAPLUS COPYRIGHT 2005 ACS on STN
AB Elemental Se and a series of selenites and selenates were applied in pot and field expts. With the elemental Se a small **increase** in **concn**. in the plants was found in both kinds of expts. with red clover, lucerne, **mustard**, and sugar beet as test plants, but not with barley. In the 2nd year an **increase** in the **concn** . in the plants was found in lucerne only (field expts.). In a pot experiment 8 successive cuts of clover all had nearly the same content. All the selenites had the same effect on the concentration in the plants, and the concentration in the 8 cuts of clover decreased with time at the same rate for all 6 selenites irresp. of solubility The decrease was about a factor of 6. In the field the effect of K2SeO3 in the 2nd year was reduced by 50 to 80%. The selenates gave the same concentration in plants independently of the solubility But the concentration was 20-50 times that obtained with selenites, and the decrease in the effect with time was greater. In the 8 clover cuts the effect of selenate decreased 4 times as much as the effect of selenite. In the field the effect of K2SeO4 decreased more from the 1st to the 2nd year than the effect of BaSeO4. During a 2 years field experiment with **mustard** the total uptake as a percent of the added Se was 0.01% of Se, 4% of K2SeO3 and 30% of K2SeO4 and BaSeO4. With lucerne, barley and sugar beet the uptake was 1/3 of this or less. Detns. of water-extractable Se in profiles from the field in the autumn showed no increase succeeding the addition of K2SeO4 in the spring while the addition of BaSeO4 increased the extractable amount in both autumns. Addition of 5 times more selenite increased the water-extractable as well as the total soil Se in the upper 25 cm, and the increase in total Se was also present in the 2nd autumn.

L5 ANSWER 13 OF 14 CAPLUS COPYRIGHT 2005 ACS on STN
AB A comparison of 10 species of plants grown on six low-Se soils showed that their Se concns. varied 10-fold when K2SeO4 was the source of Se and 5-fold when K2SeO3 was the source. The uptake of SeO42- was 8-fold greater than that of SeO32-. The Se concentration decreased as the clay content of the soil increased. There was no reduction in yield, compared with the untreated soils. The Se concentration was lowest in plants grown on muck soil. Crops from the other soils did not differ much and the ratio between the highest and lowest concentration for a single crop was 5. The concentration in the

plant after addition of Se was roughly inversely related to the clay content of the soil, and the Se concentration in the plants varied with their stage of development. With SeO42- both barley and **mustard** had a lower concentration at maturity than when green. At maturity, the grains and seed contained more Se than the straw. With SeO32-, results were the same but less pronounced for barley with all soils, whereas **mustard** seeds contained amts. of Se equal to or greater than the green plant Se. Without added Se the ratio of Se in the grain to Se in the straw was <1. The order of decreasing Se content among plant species harvested in early flowering was Cruciferae > ryegrass > Leguminosae > cereals for any given concentration and oxidation state. Of the 10 plant species studied, cereals had the smallest uptake of Se. The uptake by red clover seemed to be favored by an excess of available Se, while at moderate levels, ryegrass was a better accumulator than the clover. Increasing the addition of Se to the soil resulted in increasing absorption quotients for SeO42- and SeO32-. When the concentration in the plant exceeded .apprx.50 ppm., reduction in yield occurred. When SeO42- addition was increased 25-fold the plant **level increased** 70-fold; for SeO32-, the factor was 50.

L5 ANSWER 14 OF 14 CAPLUS COPYRIGHT 2005 ACS on STN
AB Plants analyzed in this study were grown from seed in the greenhouse and planted in a loamy soil to which had been added varying amts. of Se (5 to 30 p.p.m.) in organic selenate, or selenite forms. Range plants and grasses as well as alfalfa and timothy were included in the study. Nearly all plants were harvested at the bloom stage. All plants accumulated Se in varying amts., more or less proportional to the amts. of Se supplied to the soil. Grasses varied widely in their ability to accumulate Se; **Indian** ricegrass absorbed the most Se while western wheat was less efficient. Alkali Prince's Plume contained a relatively **high level** of Se which was present only in organic compds. Tansy aster accumulated more Se than any other plant and this amounted to over 8,000 p.p.m. when grown on a soil containing 20 p.p.m. of selenate. Maximum amts. accumulated by alfalfa and timothy were around 40 p.p.m.

=> d l5 1-14

L5 ANSWER 1 OF 14 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1998:559915 CAPLUS
DN 129:302141
TI **Selenium accumulation** by **Brassica** napus grown in Se-laden soil from different depths of Kesterson Reservoir
AU Banuelos, G. S.; Ajwa, H. A.; Wu, L.; Zambrzuski, S.
CS USDA, ARS, Water Management Research Laboratory, Fresno, CA, 93727, USA
SO Journal of Soil Contamination (1998), 7(4), 481-496
CODEN: JSOCEZ; ISSN: 1058-8337
PB CRC Press LLC
DT Journal
LA English
RE.CNT 63 THERE ARE 63 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 2 OF 14 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 1
AN 1996:355289 CAPLUS
DN 125:32741
TI Managing **high levels** of boron and **selenium** with trace element **accumulator** crops
AU Banuelos, G. S.
CS USDA-ARS Water Management Res. Lab., Fresno, CA, 93727, USA
SO Journal of Environmental Science and Health, Part A: Environmental Science and Engineering & Toxic and Hazardous Substance Control (1996), A31(5), 1179-1196
CODEN: JESHE6; ISSN: 1077-1204
PB Dekker
DT Journal
LA English

L5 ANSWER 3 OF 14 CAPLUS COPYRIGHT 2005 ACS on STN

AN 1996:722714 CAPLUS
DN 126:7275
TI **Accumulation** of **selenium** by different plant species grown under increasing sodium and calcium chloride salinity
AU Banuelos, G. S.; Zayed, A.; Terry, N.; Wu, L.; Akohoue, S.; Zambrzuski, S.
CS USDA-ARS Water Management Research Laboratory, Fresno, CA, 93727, USA
SO Plant and Soil (1996), 183(1), 49-59
CODEN: PLSOA2; ISSN: 0032-079X
PB Kluwer
DT Journal
LA English

L5 ANSWER 4 OF 14 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1994:408081 CAPLUS
DN 121:8081
TI Growth and trace element concentrations of five plant species grown in a highly saline soil
AU Retana, J.; Parker, D. R.; Amrhein, C.; Page, A. L.
CS Dep. Soil Environ. Sci., Univ. California, Riverside, CA, 92521, USA
SO Journal of Environmental Quality (1993), 22(4), 805-11
CODEN: JEVQAA; ISSN: 0047-2425
DT Journal
LA English

L5 ANSWER 5 OF 14 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1993:407876 CAPLUS
DN 119:7876
TI Soil boron and selenium removal by three plant species
AU Banuelos, G. S.; Cardon, G. E.; Phene, C. J.; Wu, L.; Akohoue, S.; Zambrzuski, S.
CS Water Manag. Res. Lab., ARS, Fresno, CA, 93727, USA
SO Plant and Soil (1993), 148(2), 253-63
CODEN: PLSOA2; ISSN: 0032-079X
DT Journal
LA English

L5 ANSWER 6 OF 14 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1992:570341 CAPLUS
DN 117:170341
TI **Uptake** and **accumulation** of **selenium** by terrestrial plants growing on a coal fly ash landfill. Part 2. Forage and root crops
AU Arthur, Mary A.; Rubin, Gail; Woodbury, Peter B.; Schneider, Robert E.; Weinstein, Leonard H.
CS Environ. Biol. Progr., Boyce Thompson Inst., Ithaca, NY, 14853, USA
SO Environmental Toxicology and Chemistry (1992), 11(9), 1289-99
CODEN: ETOCDK; ISSN: 0730-7268
DT Journal
LA English

L5 ANSWER 7 OF 14 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1992:105119 CAPLUS
DN 116:105119
TI Relations between phosphorus in drip irrigation water and **selenium uptake** by wild **mustard**
AU Banuelos, G. S.; Mead, R.; Phene, C. J.; Meek, D. W.
CS Water Manage. Res. Lab., Agric. Res. Serv., Fresno, CA, 93727, USA
SO Journal of Environmental Science and Health, Part A: Environmental Science and Engineering (1992), A27(1), 283-97
CODEN: JESEDU; ISSN: 0360-1226
DT Journal
LA English

L5 ANSWER 8 OF 14 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1991:535045 CAPLUS
DN 115:135045
TI Adding selenium-enriched plant tissue to soil causes the **accumulation** of **selenium** in alfalfa

AU Banuelos, G. S.; Mead, R.; Akohoue, S.
CS Water Manage. Res. Lab., ARS, Fresno, CA, USA
SO Journal of Plant Nutrition (1991), 14(7), 701-13
CODEN: JPNUDS; ISSN: 0190-4167
DT Journal
LA English

L5 ANSWER 9 OF 14 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2005) on STN
AN 92:6904 AGRICOLA
DN IND91050781
TI Adding selenium-enriched plant tissue to soil causes the **accumulation** of **selenium** in alfalfa.
AU Banuelos, G.S.; Mead, R.; Akohoue, S.
CS USDA-ARS, Water Management Research Laboratory, Fresno, CA
AV DNAL (QK867.J67)
SO Journal of plant nutrition, 1991. Vol. 14, No. 2. p. 701-713
Publisher: New York, N.Y. : Marcel Dekker.
CODEN: JPNUDS; ISSN: 0190-4167
NTE Includes references.
DT Article
FS U.S. Imprints not USDA, Experiment or Extension
LA English

L5 ANSWER 10 OF 14 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2005) on STN
AN 91:13803 AGRICOLA
DN IND91003436
TI **Accumulation** of **selenium** in plants grown on selenium-treated soil.
AU Banuelos, G.S.; Meek, D.W.
CS USDA-ARS, Pacific West Area, Fresno, CA
AV DNAL (QH540.J6)
SO Journal of environmental quality, Oct/Dec 1990. Vol. 19, No. 4. p. 772-777
Publisher: Madison, Wis. : American Society of Agronomy.
CODEN: JEVQAA; ISSN: 0047-2425
NTE Includes references.
DT Article
FS U.S. Imprints not USDA, Experiment or Extension
LA English

L5 ANSWER 11 OF 14 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1977:119975 CAPLUS
DN 86:119975
TI **Uptake** of applied **selenium** by plants
AU Tripathi, N.; Misra, S. G.
CS Dep. Chem., Univ. Allahabad, Allahabad, India
SO Indian Journal of Agricultural Sciences (1974), 44(12), 804-7
CODEN: IJASA3; ISSN: 0019-5022
DT Journal
LA English

L5 ANSWER 12 OF 14 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1970:434312 CAPLUS
DN 73:34312
TI **Uptake** of applied **selenium** by agricultural plants. 2. Utilization of various selenium compounds
AU Gissel-Nielsen, G.; Bisbjerg, B.
CS Agr. Res. Dep., Danish A.E.C. Res. Estab. Riso, Roskilde, Den.
SO Plant and Soil (1970), 32(2), 382-96
CODEN: PLSOA2; ISSN: 0032-079X
DT Journal
LA English

L5 . ANSWER 13 OF 14 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1969:511972 CAPLUS
DN 71:111972
TI **Uptake** of applied **selenium** by agricultural plants. I. Influence of soil type and plant species
AU Bisbjerg, B.; Gissel-Nielsen, G.
CS Res. Estab. Risoe, Roskilde, Den.
SO Plant and Soil (1969), 31(2), 287-98
CODEN: PLSOA2; ISSN: 0032-079X
DT Journal
LA English

L5 ANSWER 14 OF 14 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1964:407475 CAPLUS
DN 61:7475
OREF 61:1208c-e
TI **Uptake** of available **selenium** by certain range plants
AU Hamilton, John W.; Beath, O. A.
CS Univ. of Wyoming, Laramie
SO J. Range Management (1963), 16(5), 261-5
DT Journal
LA Unavailable

# WEST Search History

09/659,926

Hide Items | Restore | Clear | Cancel

DATE: Sunday, May 15, 2005

| Hide? | Set Name | Query | Hit Count |
|---|---|---|---|
| | *DB=PGPB,USPT,EPAB,JPAB,DWPI; PLUR=YES; OP=ADJ* | | |
| ☐ | L7 | L1 and (accumulation or accumulate) near4 selenium | 2 |
| ☐ | L6 | L1 and selenium and (soluble? availab?) | 0 |
| ☐ | L5 | La and selenium and (soluble? availab?) | 0 |
| ☐ | L4 | L1 and (selenocysteine or methylselenocysteine) | 5 |
| ☐ | L3 | L1 and selenium near3 (concentrat? or level) | 3 |
| ☐ | L2 | L1 and selenium near2 (concentrat? or level) | 3 |
| ☐ | L1 | (selenium or selenate)and (uptake or accumulate?) and (brassica or brassicaceae) | 68 |

END OF SEARCH HISTORY

# Hit List

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**Search Results** - Record(s) 1 through 3 of 3 returned.

☐ 1. Document ID: US 20040115309 A1

L3: Entry 1 of 3 File: PGPB Jun 17, 2004

PGPUB-DOCUMENT-NUMBER: 20040115309
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20040115309 A1

TITLE: Food supplement

PUBLICATION-DATE: June 17, 2004

INVENTOR-INFORMATION:

| NAME | CITY | STATE | COUNTRY | RULE-47 |
|---|---|---|---|---|
| Harris, Patricia Anna | Leicestershire | | GB | |

US-CL-CURRENT: 426/72

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw De

☐ 2. Document ID: US 6270809 B1

L3: Entry 2 of 3 File: USPT Aug 7, 2001

US-PAT-NO: 6270809
DOCUMENT-IDENTIFIER: US 6270809 B1

TITLE: Nutritional supplements

DATE-ISSUED: August 7, 2001

INVENTOR-INFORMATION:

| NAME | CITY | STATE | ZIP CODE | COUNTRY |
|---|---|---|---|---|
| Ensley; Burt D. | Newton | PA | | |
| Elless; Mark | Mount Laurel | NJ | | |
| Blaylock; Michael J. | Dayton | NJ | | |
| Huang; Jianwei | Plainsboro | NJ | | |

US-CL-CURRENT: 424/617; 424/600, 424/630, 424/639, 424/641, 424/646, 424/650, 424/655, 424/657, 424/682, 424/702, 426/74 , 514/492, 514/494, 514/499, 514/501, 514/502, 514/505

☐ 3. Document ID: US 6117462 A

L3: Entry 3 of 3 File: USPT Sep 12, 2000

US-PAT-NO: 6117462
DOCUMENT-IDENTIFIER: US 6117462 A
** See image for Certificate of Correction **

TITLE: Nutritional supplements

DATE-ISSUED: September 12, 2000

INVENTOR-INFORMATION:

| NAME | CITY | STATE | ZIP CODE | COUNTRY |
|---|---|---|---|---|
| Ensley; Burt D. | Newtown | PA | | |
| Elless; Mark | Mt. Laurel | NJ | | |
| Blaylock; Michael J. | Dayton | NJ | | |
| Huang; Jianwei | Plainsboro | NJ | | |

US-CL-CURRENT: 426/74; 426/615, 426/648, 426/809

Full | Title | Citation | Front | Review | Classification | Date | Reference | | | Claims | KWIC | Draw D

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| Terms | Documents |
|---|---|
| L1 and selenium near3 (concentrat? or level) | 3 |

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